

The Lay of the Land

The Newsletter of the Solano Resource Conservation District

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Change Is Upon Us

By Christopher Rose

In a constantly changing world, Solano Resource Conservation District strives to be a dynamic organization. We answer public needs and local resource challenges by implementing conservation work that improves the sustainability and livability of the District and County.

80% of the funds Solano RCD uses to undertake this work come to us through the competitive grant process. These monies support restoration activities, education programs, and water quality projects. Grant funding can be a fantastic answer to local resource deficits, but building an effective program based on grant funding that usually comes in three-year increments requires us to create and sustain active partnerships with a diverse group of agencies and organizations. We have to maintain a solid commitment to the various components of successful grant funding, which include ongoing work to find and develop opportunities that meet the conservation needs agreed upon by our partners and stakeholders. We also need to outreach to all the different populations in the County to share resource management information and goals. We accomplish this with our K-12 education field trip programs, volunteer plant propagation and restoration implementation days, and training workshops and events at our Conservation Education Center (CEC) targeted to current resource issues and needs.

As a result of this work, new developments and projects abound at Solano RCD. This issue is dedicated to introducing new projects, new staff and the ongoing efforts to maximize our budget to provide the greatest amount of service and benefit to the District and County through our efforts at the CEC, in the field, and in the office.

Change really is an integral part of the way we operate. Recently, the Natural Resources Conservation Service (NRCS) and Farm Services Agency (FSA) moved to their new location in the Solano Irrigation District building on Vaca Valley Road in Vacaville. Solano and Dixon RCD remain at the office located at 1170 N Lincoln Street in Dixon. Dixon RCD's John Currey led a thorough cleaning and reorganization of the space, and the Dixon location has evolved into a more functional and efficient office space. We have installed new phones, re-routed data lines, remodeled the kitchen/lunch area, converted an office to a small conference room and purchased replacements to standard office equipment that NRCS took with them. We miss the close work interaction and lunchtime conversations with NRCS staff who are friends as well as colleagues, but the new office arrangements won't interrupt our solid working relationships, and NRCS will remain an integral partner in our projects.

The last change I want to talk about is somewhat bittersweet. Our Restoration Project Manager Michael Gordon is leaving Solano RCD to join the Napa County Flood Control and Water Conservation District in Napa. Since Michael lives in Napa, this is a good change for him, and we wish him much success in his new position. Michael has been an invaluable asset to the RCD over the past three years with his enthusiasm, expertise, work ethic and his great attitude. All of us will miss him, both in the office and in the field.



Restoration Project Manager Michael Gordon, out in the field before he begins a new job at the Napa County Flood Control and Water Conservation District.

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New Plant Pathogen Changes Restoration Practices

By Katherine Holmes, Assistant Executive Director

Those of us in the native plant business have been concerned about Sudden Oak Death for many years now. Sudden Oak Death is caused by *Phytophthora ramorum*, a plant pathogen commonly known as a water mold. This tiny organism was accidentally brought to California as part of the horticultural trade in the mid-1990s, has escaped into wildland areas, and has killed millions of coast live oaks and other trees on the Pacific Coast. *P. ramorum* doesn't thrive outside of the coastal fog belt, so plant communities in most of Solano County have been minimally affected by *P. ramorum*.

Recently, however, a new type of non-native water mold has emerged - *Phytophthora tentaculata*. This pathogen can survive in the hot Central Valley and kills a different set of native plants, including several that we frequently plant at restoration sites - toyon, coffeeberry and sticky monkey flower. Unfortunately *P. tentaculata* has shown up at several native plant nurseries in the past year and has even been transplanted into a restoration site over on the San Francisco peninsula.

Solano RCD has always maintained high standards for our own native plant propagation activities, including growing plants on platforms off the ground (water molds can move in puddles), scrubbing and sanitizing all our pots before we reuse them, and never reusing potting soil. However, with the alarming news of this new plant pathogen, Solano RCD has greatly increased our focus on disease prevention.

First of all, we invited staff from California Department of Food and Agriculture (CDEA) to our nursery to give us ideas on how we could improve our practices. Based on their suggestions, we've made several changes. For example, we now use only new pots and recycle all our used pots at a plastics recycling facility.

We started using Agdia immune strips to test sickly looking plants to see if they are infected with Phytophthora. (So far we've not had any positive tests - hurray!) We've begun sterilizing all our tools (shovels, hoes, etc.) after every field day. We're even working with CDEA on an experiment to test if sun solarization can be used to sterilize used pots and tree tubes.



Solano RCD is now using Agdia immune test strips to test for Phytophthora on any unhealthy-looking plants in



CDEA is running an experiment (using Solano RCD's pots and Tubex tubes) to test if sun solarization can effectively kill Phytophthora.

Second, we started actively working with local native plant nurseries from whom we commonly buy plants to encourage them to adapt aggressive disease prevention measures. So far we've interviewed and/or conducted site visits with five different native plant nurseries.

Finally, we built a quarantine area at our facility where we are isolating any plants we buy from other nurseries for at least eight weeks. We are monitoring the plants during that period to see if they start to exhibit Phytophthora symptoms, and will test them with Agdia strips as necessary.

We've been working informally with other local

native plant organizations (including Yolo RCD and Putah Creek Council), and have been participating in California Native Nursery Network workshops to make sure we stay informed on this important issue.

Our goal is to continue restoring Solano County's wildlands with healthy disease-free native plants!



Jerah Frye, Restoration Technician, puts the finishing touches on Solano RCD's new plant quarantine area.

New Projects at Dunnell Nature Park and Cronin Ranch

By Andrea Mummert Puccini, Conservation Project Manager

Native Grassland Habitat at Dunnell Nature Park and Education Center

For more than ten years, the City of Fairfield has been working with a citizen advisory committee to design a Nature Park and Education Center on the former Dunnell Ranch property, located at the intersection of Hilborn Road and Hillridge Drive and bordered by Union Creek.

The City and advisory committee created a site plan that preserves the natural characteristics of the 6.2 acre property while adding park features. The outdoor space will be publically accessible and connects to trails that continue on adjacent open space areas. The nature center is housed in the original ranch house, which was expanded and renovated and to preserve unique architectural features such as exposed beam ceilings.

In 2011, the City was awarded a grant from the California Department of Parks and Recreation to complete construction and landscaping. The project includes numerous environmentally sustainable features including: pervious concrete, solar panels, rain gardens, and a water-wise native plant demonstration garden. Construction is nearly complete, with the center planned to open in 2016.



Plan for Fairfield's Dunnell Nature Park and Education Center.

The City is contracting with Solano RCD to install a native grassland habitat on one acre of the property. Through this fall and winter (2015 – 2016), the RCD will undertake weed control, grass seeding, and plug planting. A newly established native grass stand should be on-site by summer of 2016. RCD staff will continue weed control and maintenance efforts through the following year. By the fall of 2017, the site will support a self-sustaining native grassland that will require minimal maintenance

and no irrigation. Adjacent to the grassland will be areas of oak woodland, riparian forest, and flowering native plants, creating a mosaic of habitats from which the public can learn about California's diverse ecosystems.

New Cronin Ranch Project

This fall, the California Wildlife Conservation Board funded Solano RCD to implement a habitat restoration and enhancement project on Cronin Ranch. This project will also receive cost-share funding through the NRCS EQIP program.

The Cronin family ranch comprises 2,224 acres on Liberty Island Road, south of Lindsey Slough, near its confluence with Cache Slough.

Our project will enhance a half-mile stretch of a historic creek now used as an irrigation drainage channel. Currently, the channel's northern banks are bordered by a dirt road and are predominantly bare or weedy and offer little wildlife habitat.



Riparian habitat restoration site on the Cronin Ranch.

This project will restore a 4.5 acre area adjacent to the channel that is currently occupied by a road, an irrigation supply ditch, and pasture (see Photo above). We will install 1112 native tree and shrub plantings, 5728 native sedge, rush, and grass plugs, and 135 pounds of native grass seed.

The project will also improve the habitat value of the ranch's existing drainage and water supply ditches, which represent the best remaining surrogate for habitat that was historically provided by the network of waterways that laced through the Delta. Many of the ranch's ditches are currently accessible to cattle as drinking sources, which damages vegetation, causes erosion, and harms water quality. Through this project, the rancher will install fencing to exclude livestock from 2.1 miles of ditches and install 5 off-stream watering facilities. The new infrastructure will provide water quality benefits and allow native vegetation to establish.

Solano RCD staff worked cooperatively with the Cronin family farm manager, the leasing cattle rancher, Reclamation District 536, and NRCS staff to plan this project. This site will serve as a model of a project that balances the functional needs of water infrastructure while also supporting a diversity of native plant and wildlife species.

Invasive Plants, Burrowing Owls and the Air Force

By Michael Gordon, Restoration Project Manager

Technical Assistance to Travis Air Force Base

Project elements:

- Map invasive plant populations throughout management areas on base
- Undertake control efforts on high priority populations
- Survey for Burrowing owls and burrow locations in the winter and summer

Project time scale: 2014-2015. Solano RCD is in the process of renewing the contract to continue control next year.

Accomplishments:

- Solano RCD mowed and weedwacked 10.5 acres of barbed goatgrass before it could set seed.
- Solano RCD recorded early stage infestations of arundo, artichoke thistle, and Armenian blackberry.
- Several new active burrow locations were discovered this year. Some of these were in areas with surprisingly high foot traffic.

Fun facts:

Travis AFB has rich vernal pool ecosystems that include threatened CA Tiger Salamanders, *Ambystoma californiense*, and federally endangered Contra Costa goldfields, *Lasthenia conjugens*.

There have been two fires in the natural resources management areas this year, each of which is likely to have beneficial effects on the vegetation.



Immature barbed goatgrass, *Aegilops triuncialis*.

Working Toward Clearer Water in Barker Slough with the Barker Slough Watershed Partnership

Project elements:

- Revisit infrastructure installation locations and assess current conditions on the ground with annual photo monitoring
- Update watershed map to reflect current land uses by parcel
- Administer a small grant program to support improvements to livestock practices to improve water quality
- Promote partnership between agencies and residents to address water quality concerns in Barker Slough

Project time scale: 2015-2017.

Accomplishments:

Work will begin this fall with the current conditions assessments and the land use map update

Fun facts:

Flows from Barker Slough play a significant role in the quality of water available to the North Bay Aqueduct. The aqueduct provides water to Travis Air Force Base, and the cities of Fairfield, Vacaville, Benicia, Vallejo, Napa, and American Canyon.

New School Year, New Superhero, New Program

By the Education Program Team

Solano RCD's education programming provides ongoing watershed education programming to Solano County residents. Many of these programs are ongoing, but every year we work with new class of students, a new group of interns or new teachers, so change is something we count on. The goal of our student education programming is to interact with County children three times during their K-12 years. Our Watershed Explorers Program takes third graders on a full-day field trip to a local park, where they are introduced to the concepts of watershed science. The program runs January through June each year. The Solano County Biomonitoring program is a ten-week program that teaches high school students about stream ecology and culminates in an all-day biomonitoring field trip at a local creek. Registration for both of these programs is open and can be found under the *Projects and Programs* tab on solanorcd.org.

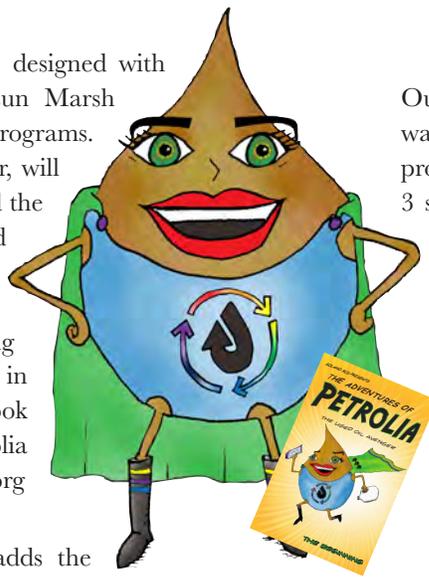


Educator Deb Bartens leads a group of Suisun Marsh Watershed students on a hike to collect a soil sample.

Each fall, our Suisun Marsh Watershed Program provides a series of 6 in-class lessons to prepare 6th grade students for an all-day field trip to Rush Ranch Open Space in the Suisun Marsh. Supported by the Solano County Water Agency, this program has enrolled 40 classes of 1,300 students for this fall's programming, with classes underway now. This is the largest class this program has seen to date, and we're excited at the opportunity to introduce so many of the County's middle school students to Rush Ranch, and to give them the opportunity to see first hand the ecosystem processes at play in the marsh's rare and special habitat.

All of our educational programming is funded by a coalition of County partners, augmented with grant awards. We are in the second and final year of a Used Oil Recycling Grant from CalRecycle, in partnership with Solano County. This grant funded development of a cartoon character to support and expand our

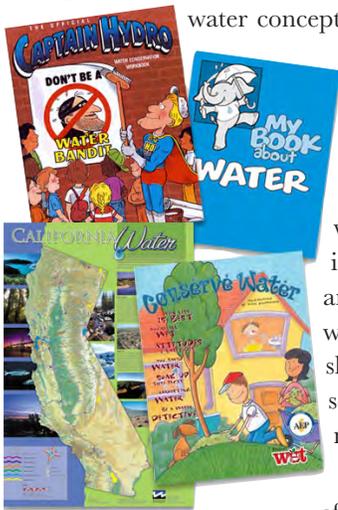
used oil recycling curriculum, designed with and by students in our Suisun Marsh and Watershed Explorers programs. Petrolia, the Used Oil Avenger, will come to life this fall, visiting all the Suisun Marsh and Watershed Explorer classrooms and sharing the first edition of her very own comic book, featuring used oil recycling adventures in Solano County. The comic book and live-action photos of Petrolia will be available on solanorcd.org by mid October.



This year, Solano RCD adds the School Water Education Program



(SWEP) to its educational programming. SWEP provides resources to teach County students where their water comes from and how they can conserve water on a day-to-day basis. The program partners with teachers throughout Solano County to provide in-class sessions to K-12 students on water awareness and conservation. SWEP also provides teachers loan materials to teach about various water concepts in their classroom. In February,



SWEP will offer Project WET (Water Education Training) to County teachers. Project WET provides teachers a curriculum and support materials to integrate water conservation and awareness into their daily lessons. Teachers and others who work with children who are interested in this program should contact Laura Morgan at schoolwatered@gmail.com for more information.

Our field trips and outreach efforts would not be possible without our dedicated staff of educators. These talented

folks are in the field with our programs 3-4 days a week, working with hundreds of students, teachers and chaperones. They are an incredible asset and one of our most valuable educational resources.



Solano RCD Education Program staff, l-r: Education Program Coordinator Laura Morgan; Educator Wendy Low; Education Program Manager Marianne Butler; Educators Deb Bartens, Don Broderson, Anna Kluge, Carla Murphy and Jill Bolduc; and Assistant Education Program Manager Jamie Solomon.

During the late spring and summer, we manage a Boater Outreach and Education Program at Lake Berryessa, the drinking water source for almost half a million County residents. That program just finished its 2015 run, which involved 11 interns and 3 student supervisors working full time at Lake Berryessa from Memorial Day through Labor Day. In October, interns will present their summer data to the Lake Berryessa Watershed Partnership.



Lake Berryessa Boater Outreach intern Devin with a group of boaters who have just filled out a Boater Survey.

The RCD coordinates the annual Coastal Cleanup Day every September to support hands-on education/ volunteer involvement by County residents. This year's event took place on September 19, on a cloudless warm day at 60 locations throughout the County and three at Lake Berryessa. More information about the day's success can be found on the front page of solanorcd.org.



A good day's haul: Rio Vista's 31st Annual Coastal Cleanup water team, boats loaded with trash and recyclables pulled from the Sacramento River.

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Inside: Soalno Fall brings changes to the RCD

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Suisun Marsh Watershed Program students discussing the smell of soil during their field trip to Solano Land Trust's Rush Ranch Open Space.

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